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Rev	Date	Description	POC	RM
0	06/23/16	Initial issue	Tobin Oruch, ES-DO	Mel Burnett, CENG-OFF
1	05/25/17	Added reference to Engineering Services software inventory and its instructions; clarifications.	Tobin Oruch, ES-DO	Lawrence Goen, ES-DO

1.0 PURPOSE, SCOPE AND APPLICABILITY

This section describes the "how, when, and who" for inventorying software. See Table 21.5-1 for a summary of this section. See Chapter 21 applicability in SOFT-GEN.

2.0 KEY DEFINITIONS AND ACRONYMS

See SOFT-GEN for key definitions and acronyms.

3.0 SSC SOFTWARE INVENTORY

A. <u>How.</u> Inventory **safety** SSC software in the <u>LANL Institutional-level safety software inventory</u> in accordance with <u>QPA-DO-FSD-001</u>, *LANL Safety Software Inventory Procedure*. **Non-safety** SSC software is not required to be inventoried.

Note: See ESM Chapter 21, SOFT-GEN and Form 2033 to determine if the software is safety software.

- 1. Provide required information, namely:
 - a. Software name,
 - b. Description,
 - c. Version identifier,
 - d. Category,
 - e. Software Risk Level (SRL),
 - f. Application,
 - g. Software Responsible Line Manager (SRLM), and
 - h. Other information as required by QPA-DO-FSD-001.

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	Table 21.5-1 SOFT-INV Section Summary (This table is a summary only and does not include all requirement details. See text for details.)										
Activity No.	SQM Activity	Software Type ¹		Implementation Detail			ESM Ch. 21 Ref. ⁵				
		Safety	Non- Safety	How	When ²	Who ^{3, 4}	LOW OII. 21 Nei.				
1. For <u>SSC</u> Software											
1	Inventory safety software	R	-	Provide <u>safety software</u> inventory information Inventory safety software Per <u>QPA-DO-FSD-001</u> , LANL Safety Software Inventory Procedure	 Provide SSC software inventory information per ESM Chapter 1, Z10 submittal schedule Inventory as soon as practical after approval for use Revise as needed to ensure the inventory is complete and accurate 	 Design Agency provides safety SSC software inventory information in PEL for designed and acquired software; see SOFT-GEN for Subcontractor responsibilities (D) SRLM inventories safety software (D) 	SOFT-GEN, 3 SOFT-INV, 3				
1. For Nor	n-SSC Softw	are									
1	Inventory safety and non- safety software	R	R	 Inventory safety software in the Institutional-level safety software inventory per QPA-DO-FSD-001, LANL Safety Software Inventory Procedure ES-Div: Inventory safety and non-safety software in the ES Non-SSC software inventory per ESDO-AP-002. 	 Inventory as soon as practical after approval for use Revise as needed to ensure the inventory is complete and accurate 	 Design Agency provides safety SSC software inventory information in PEL for designed and acquired software; see SOFT-GEN for Subcontractor responsibilities (D) SRLM inventories software (D) ESSC supports ES Non-SSC software inventory additions/changes (S) 	SOFT-GEN, 3 SOFT-INV, 4				

Notes:

¹ See SOFT-GEN and Form 2033 to determine if software is safety software or non-safety software. R = Required; "-" = Not required

 $^{^{\}rm 2}$ "When" specifies when the activity must be performed

 $^{^{3}}$ D = Develop or execute. S = Support

⁴ SRLM = Software Responsible Line Manager. ESSC = Engineering Services (ES) Software Coordinator as indicated on the <u>ES Division Office (ES-DO) website</u>. See SOFT-GEN (e.g., flow diagram) for assistance in identifying the SRLM

⁵ Ref. = ESM Chapter 21 section name and subsection number (e.g., Section SOFT-GEN, Subsection 3, Software Identification and Determination)

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Note: Do not enter classified or controlled unclassified information (CUI) into the inventory.

- 2. Provide changes to the inventory to ensure completeness and accuracy.
- 3. Subcontractors that provide SSC software to LANL must provide minimum required SSC Safety Software inventory information as part of the Project Equipment List (PEL) or via other submittal per ESM Chapter 1, Section Z10.
- If LANL has access to and/or configuration control of SSC safety software¹, then it must be inventoried on the Institutional-level safety software inventory.
- 5. SSC safety software may be inventoried as a software collection. For example, there may be various software elements control system executable, Human Machine Interface (HMI) software, field element embedded software associated with a gas handling process control system software. The software may be inventoried as one item, the gas handling process control system software. Note that the various software elements must be baselined and under configuration management per SOFT-GEN.
- B. When. Inventory SSC safety software as soon as practical after it is approved for use and as needed to ensure the inventory is complete and accurate. Provide inventory information in accordance with the PEL or other submittals schedule per ESM Chapter 1, Section Z10.
- C. <u>Who.</u> Design Agency provides safety SSC software inventory information in PEL for designed and acquired software; see SOFT-GEN for Subcontractor responsibilities. The SRLM² is responsible for inventorying safety SSC software.

4.0 NON-SSC SOFTWARE INVENTORY

- A. How.
 - 1. Inventory **safety** Non-SSC software in the <u>Institutional-level safety software</u> inventory in accordance with QPA-DO-FSD-001.
 - a. Subcontractors: Safety Non-SSC software used by a subcontractor and prescribed or otherwise controlled by LANL or DOE (e.g., toolbox codes) must be inventoried. The Subcontractor shall provide the minimum required safety software information to inventory such software in the institutional-level safety software inventory.
 - ES-Div: Inventory safety and non-safety Non-SSC software in the
 <u>Engineering Services (ES) Non-SSC software inventory</u> in accordance with
 <u>ESDO-AP-002</u>, Engineering Services (ES) Software Inventory Instructions.
 For assistance, contact the ES Software Coordinator (ESSC) at <u>ES-Software @lanl.gov.</u>

Note: As described in SOFT-MAINT, the software should not be used unless it is listed on the ES inventory or otherwise approved for use (SWAU). The listing of the software on the ES inventory is the primary method to communicate SWAU.

¹ Includes LANL service contracts where suppliers may upgrade/flash new software on SSCs.

² The activity may be delegated however the responsibility is retained by the SRLM.

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- B. When. Inventory Non-SSC software (both safety and, for ES-Div, non-safety) concurrent with SWAU and as needed thereafter to ensure completeness and accuracy.
- C. Who. The SRLM is responsible for inventorying Non-SSC software.